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### Laser treatment of alloys

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## Publications

1. J.T. De Hosson, V. Ocelík and U. Oliveira, *Coatings with Laser Melt Injection of Ceramic Particles*, in: Surface Engineering in Materials Science II, eds. S. Seal, N.B. Dahotre, J. Moore, A. Agarwal, and S. Suryanarayana, ISBN: 0-87339-537-9, TSM International, 2003, 197-207.
2. V. Ocelík, S. Nijman, R. van Ingen, U. Oliveira, J.Th.M. De Hosson: *Laser melt injection of hard ceramic particles into Al and Ti alloys - processing, microstructure and mechanical behaviour*, Surface Treatment VI: Computer methods and Experimental Measurement for Surface treatment Effects, C.A. Brebbia, J.T.M. de Hosson, S.I. Nishida (editors), WITPress, Southampton, Boston 2003, 141-153.
3. V. Ocelík, U. de Oliveira, A.H. Pieren, J.Th.M. De Hosson: *Thick Coatings by Coaxial Laser Cladding*, Proceedings of the International Conference on Advances in Surface Treatment: Research & Applications (ASTRA), November 3-6, 2003, Hyderabad, India, Eds: T.S. Sudarshan, G. Sundararajan, G.E. Totten & S.V. Joshi, Society for Advancement of Heat Treatment & Surface Engineering (SAHTSE), c/o ARCI, Hyderabad, India, October 2004, 191-198.
4. U. de Oliveira, V. Ocelík, J.Th.M. De Hosson: *Thick Co base coatings by Nd:YAG laser cladding: process and residual strain analysis*, Surface Modification Technologies XVIII, Eds. T.S. Sudarshan, M. Jeandin and J.J. Stiglich, Proceedings of the Eighteen International Conference on Surface Modification Technologies held in Dijon, France November 15-17, 2004, ASM International and The Institute of Materials, Minerals and Mining, 2006, 295-300.
5. Ocelík V., Tang P.N., de Boer M.C., De Oliveira U.O.B., De Hosson J.Th.M.: *Laser surface treatment of grey cast iron for automotive applications*, Computer Methods and Experimental Measurements for Surface Effects and Contact Mechanics VII, Eds. J.T.M. de Hosson, C.A. Brebbia and S.-I. Nishida, WIT Press, Southampton 2005, 221-230.
6. U. de Oliveira, V. Ocelík and J.Th.M. De Hosson, *Analysis of coaxial laser cladding processing conditions*, Surface Science and Technology, 197 (2005) 127-136.
7. U. de Oliveira, V. Ocelík, J.Th.M. De Hosson, *Side laser cladding deposition and residual stress in a Co-based layer on steel*, Proceedings of the Third International Surface Engineering Congress, Orlando-USA, 2-4 August 2004, 329-333.

8. J.Th.M. De Hosson, U. De Oliveira, V. Ocelík: *Coaxial Laser Cladding: Theory and Experiments*, International Conference on New Frontiers of Process Science and Engineering in Advanced Materials, Nov. 24-26. 2004 Kyoto, Japan.
9. U. de Oliveira, V. Ocelík, J.Th.M De Hosson, *Residual stresses in Co-based laser claddings investigated by lab X-rays and synchrotron diffraction techniques*, Computer Methods and Experimental Measurements for Surface Effects and Contact Mechanics VII, Eds. J.T.M. de Hosson, C.A. Brebbia and S.-I. Nishida, WIT Press, Southampton 2005, 241-250.
10. U. de Oliveira, V. Ocelík, J.Th.M. De Hosson, *Residual stress analysis in Co-based laser clad layers by lab X-rays and synchrotron diffraction techniques*, Surface and Coatings Technology 201 (2006), 533-542.
11. V. Ocelík, U. de Oliveira, M. de Boer, J.Th.M. de Hosson: *Thick Co and Fe based coatings by laser cladding - analysis of processing conditions, microstructure and properties*, Beam technologies & Laser Application, Fifth International Conference, 23-28 September, 2006, Saint-Petersburg, Russia, in press.
12. V. Ocelík, U. de Oliveira, M. de Boer, J.Th.M. de Hosson, *Thick Co based coating on cast irons by side laser cladding. Analysis of processing conditions and coating properties*, Surface and Coatings Technology, accepted.
13. U. de Oliveira, V. Ocelík, J.Th.M De Hosson, *Microstresses and microstructure in thick cobalt-based laser deposited coatings*, Surface and Coatings Technology, accepted.
14. V. Ocelík, U. De Oliveira, J. Th. M. De Hosson: *Thick tool steel coating by laser cladding*, in preparation.
15. U. de Oliveira, V Ocelík, J.Th.M. De Hosson, *Microstructure evolution of laser deposited clad tracks*, to be published.